



Your Global Leak
and Function Test
Solution Experts

Sentinel Blackbelt™

LEAK AND FLOW TEST INSTRUMENTS



Sentinel Blackbelt Leak Test Instrument

The Sentinel Blackbelt is a compact, benchtop instrument offering powerful testing capabilities for pressure decay and mass flow applications. The Sentinel Blackbelt can be ordered with multiple test options, which may operate as independently conducted tests or as a complete testing sequence. The Blackbelt may be ordered with one, two, three, or four sequential test ports.

Test Types

Pressure or Vacuum Testing

- Pressure decay - ΔP
- Pressure decay over time - $\Delta P/\Delta T$
- Pressure decay to leak standard
- Occlusion (blockage)
- Pressure verify
- Flow
- Flow to leak standard
- Ramp to pressure event
- Ramp to input event
- Ramp to flow event
- Ramp to proof

Industry Applications

- Medical
- Automotive
- Industrial
- Consumer electronics
- Aerospace
- Military

Why use Sentinel Blackbelt?

Superior Performance

- Best-in-class measurement accuracy and resolution:
 - PD to 0.0000001 psig /
 - Mass flow to 0.01 sccm
 - PD Accuracy = 0.05% FS
 - PD Resolution = 0.000004 to 0.0001 (range dependent)
 - MF Accuracy = 0.5% FS
 - MF Resolution = 0.01 sccm (all ranges)
- Powerful 32-bit processor
- 24 bit A/D converter
- Modular pneumatic manifolds for future upgradability
- Flow meter sized to the application
- Environmental drift correction

Global Friendly

- Language neutral operator interface
- Multi-language - software selectable
 - English, Spanish, Portuguese, Chinese, and Korean
- Smart voltage selection
- International power cable included

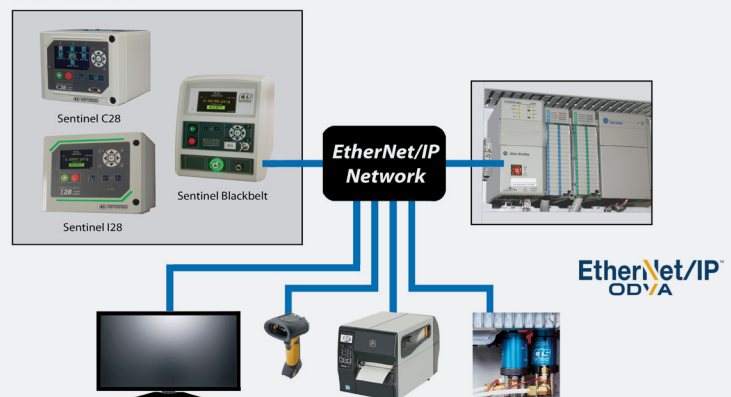
Low Maintenance

- Reduced wear – long life valves and manifolds
- Self-Test function
- 24/7/365 no-charge phone support
- 2-year warranty

EtherNet/IP™ Communication

- Leak and flow system integration made easy
 - RJ45 interface connection
 - Reduces installation time
 - Simple 'plug-and-play' integration to PLC
- Provides more I/O
 - 26 inputs / 25 outputs
- CTS EtherNet/IP is ODVA Conformance Tested for flawless operation and verified data exchange

Typical CTS EtherNet/IP Network Interface



Key Features

Refer to datasheet for full list of specifications.

Test Range Options by Model

- Pressure: -14.5 to 500 psig
- Flow: 0.5 to 20,000 scc/min

Data / Communications

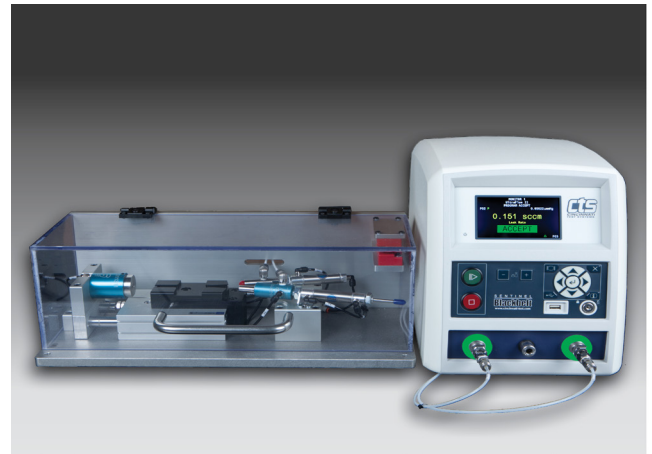
- Data storage to 5,000 test events, expandable with USB memory stick
- 99 test program storage
- 6 inputs/6 outputs with 5 programmable tooling motions
- Digital input feedback verifies motion
- Flow and leak auto calibration
- RS232 and Ethernet communication ports
- EtherNet/IP™ communication
- Barcode unique part or batch number identification
- Email of reports, test data, and alerts
- Test result data transmission with definable fields

Features Overview

- Patented Auto Setup
- Quik Test reduces cycle time
- High contrast color display
- XY Graphing (pressure, loss, or flow)
- Low volume and high flow manifold designs
- Multi-point calibration on electronic regulators
- Custom pressure and flow ranges available
- Multiple pressure sources (mechanical or electronic regulation)
- Optional pneumatic clamping/coupling valves with poke-yoke capability



Sentinel Blackbelt leak and flow test instrument



Custom CTS Blackbelt benchtop turnkey test system

Our Family of Test Instruments and Products



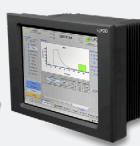
Blackbelt Pro



Sentinel 3520



sigPOD Controller



MH



CTS Connect® Connectors and Seals



I28



C28



LPC 528



C20



TracerMate CS



CTS Leak Standards and Calibration Services

BETTER TOGETHER

CTS, innomatec and Sciometric are subsidiaries of the TASI Group, within TASI's Product Integrity Division. We are unified by the fact that we are "Better Together". Together, we deliver the broadest leak test portfolio in the industry. Together, we serve our customers through a global network of offices and partners. Together, we will harness the power of the Industrial Internet of Things and bring all of its potential to industrial companies worldwide.

INDUSTRIES WE SPECIALIZE IN



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